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HOMEMAKERS' CHAT

MONDAY, July 29, 1940

(FOR BROADCAST USE ONLY)

Subject: "NEW WAYS WITH WHEY." Information from the Bureau of Dairy Industry, United States Department of Agriculture.

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Ordinarily you wouldn't turn to a nursery rhyme for advice on what to eat, or how to use a waste product of agriculture. But Little Miss Muffet set an example worth following. You remember Miss Muffet "eating her curds and whey," in other words, getting all the nourishment from whole milk. If everyone ate as she did, many people would be better nourished, and this country would not have billions of pounds of waste whey to dispose of every year.

The trouble is that, unlike Miss Muffet, we eat the curds but not the whey. Cheese factories use only the curd from the milk. The whey or liquid left from cheese-making is a problem and expense to get rid of. Each year cheese factories in the United States have between 4 and 5 billion pounds of waste whey on their hands. In one year recently the figure came to 5 billion 931 million pounds of whey. Some of this whey goes back to the farm as liquid food for pigs and chickens. Some is condensed and sold for livestock feed. About a fifth of it is dried and made into whey powder. Whey powder goes into some commercial poultry feed; a little of it sells in drug stores to people on special diets. But in spite of these various uses, great quantities of whey go down the drains of the cheese factories. In fact, so much is thrown out every day that whey pollutes thousands of streams and rivers.

Think of it--streams and rivers flowing with the nourishment many people need! For whey is high in nutritive value. It contains about half the food solids of milk--a good deal of the best nourishment the 25 million cows in this country produce. Whey combines protein, milk-sugar, valuable minerals like calcium, and



the water-soluble vitamins of the milk. Many people are undernourished for lack of these food substances. And farmers get less for their milk because the whey goes to waste.

Up to now whey has made little progress as a human food for several reasons. An important reason is that whey alone doesn't have an appetizing flavor.

So in recent years dairy scientists of the U. S. Department of Agriculture have been working to find ways of adding whey to other foods, or to develop new foods having whey as a principal ingredient. B. H. Webb and C. F. Hufnagel of the Bureau of Dairy Industry have been trying whey in everything from soup to nuts, as the saying goes. They have been interested chiefly in commercial possibilities for whey--ways food-manufacturers may someday use whey.

One possibility is in canned soup, especially cream soup and tomato soup. Whey--fresh, condensed or powdered--not only adds nutritive value but also improves the taste and the looks of many different vegetable soups. Whey may also be a possibility for sauces and gravies. Whey combines well with tomatoes for soup of any kind.

Another possibility reported by the dairy scientists is a whey-and-tomato drink. They worked out this beverage using about two-thirds tomato juice and one-third fresh whey with salt for seasoning. They processed this mixture in cans and found it good to drink cold, or hot as thin tomato broth; and they found it made a good cream-style tomato soup thickened with flour.

Since whey combines so well with tomatoes, you might guess it would also combine well with acid fruit. This proved true in the whey-fruit beverages developed by the dairy scientists. They mixed fresh sweet whey with various fruit juices and made nutritious, low-cost, delicious beverages. These whey-fruit drinks were successful canned as well as fresh. Acid fruit juice combines successfully with whey, but not with milk because the acid curdles the milk. But in fruit-whey





drinks you can get much of the food value of both fruit and milk.

Another good product developed by the dairy scientists was whey-fruit whip. They prepared fruit-whip mixtures, containing whey but no egg white. They used fresh liquid whey and also whey powder combined with fruit, sugar and a little gelatin. They tried out the mixture canned, and found it kept well for as long as 4 months. And they found this whey-fruit whip, mixed with whipped cream, would freeze into a good ice-cream.

While they were working on whey whips they also found they could mix whey with jam and get a very pretty, as well as delicious, fruit froth. The whipped jam makes an attractive garnish for ice cream, waffles, or any dessert needing a sweet sauce.

But perhaps the most promising new use for whey is in candy-making. The scientists evaporated sweet pasteurized whey and sugar together in a vacuum until thick and smooth. They found this product excellent for fudge, taffy and caramels. Sweetened condensed whey is easy and cheap to prepare, easy and convenient to use, and keeps well. It can replace the skimmilk and sugar in candy and even some of the corn sirup. So whey may become a stock in trade of the candy manufacturer.

The scientists not only used whey in making familiar candy like fudge, taffy and caramels, but they also developed a new kind of candy which they called "wheyfers." Wheyfers are not cooked but dried hard and crisp. The scientists made them by whipping air into sweetened condensed whey until it was light and fluffy; adding chopped nuts and cooked cereal; rolling the mixture into a thin layer; drying and cutting it into wafers; and dipping the wafers in chocolate.

So getting back to Miss Muffet again, Miss Muffet of the future may eat her curds in the form of cheese, and her whey in canned soup, fruit drinks, desserts or candy.

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